

Efficacy of insect-exclusion netting in Western CO vegetable production



OVERVIEW

- In 2022, Highwater Farm was awarded a Farmer/Rancher Grant to conduct on-farm research.
- Research was focused on assessing impacts of insect and/or shade covering over various crops.
- Primary impacts to exposed crops (no covering) were both environmental and pest pressure.



METHODS

- Field plots were organized within the same growing block for each crop analyzed.
- All crops assessed were row crops, with water delivered through drip irrigation and overhead sprinklers.
- Control rows for each crop were cultivated using no covering.
- Study rows included insect exclusion netting and/or 30% shade cloth.
- Insect traps were distributed throughout both control and study rows.
- Yields were collected from each row and produce flavor was surveyed.

RESULTS

- There were yield differences between control and study rows in each crop and variety.
- **7 of the 11** crops/varieties analyzed had a positive yield response to netting and/or shade covering compared to the control.
- **4 of the 11** crops/varieties analyzed had a negative yield response to netting and/or shade covering compared to the control.
- Qualitative data indicated **less pest damage** and **better quality** produce from covered crops.

COSTS

Additional Material Cost

+\$100/100ft.

Additional Labor Required

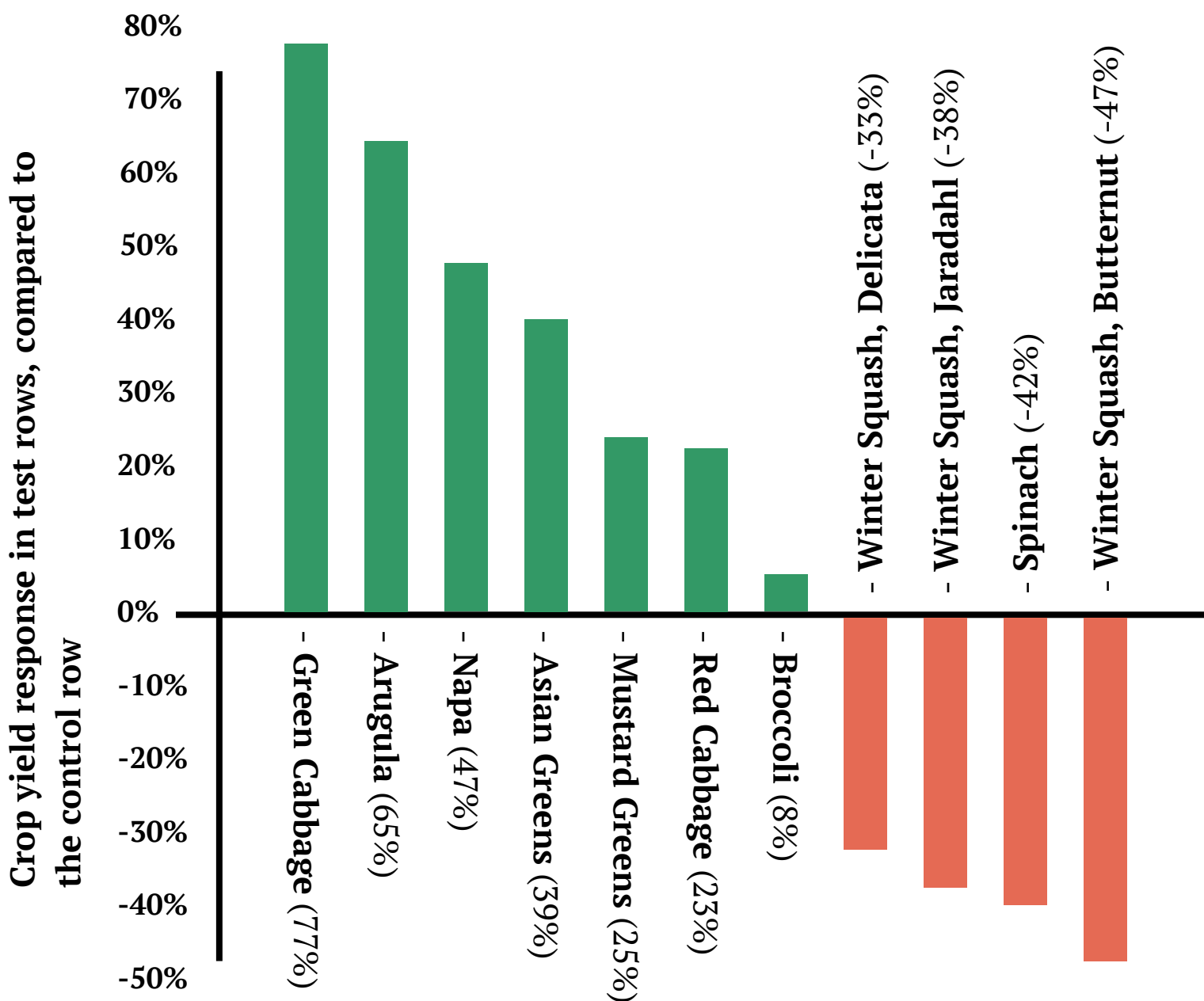
+3.3hr./100ft.

*Costs are based on row feet for a 3ft. wide row
Materials are estimated to last 5 years*

Calculate the estimated cost and benefit on your farm based on these results, click or scan the QR Code ->



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DISCUSSION

- Overall, winter squash varieties had a negative yield impact from insect exclusion netting test rows. Spinach also had a negative yield impact in the shade cloth and insect netting row compared to the control (insect netting only). Based on these results, **covering is not recommended**.
- There was a positive and significant yield response from brassicas crops with insect netting, as well as mustard and Asian greens with insect and shade cloths. Based on these results, **covering is recommended**.
- In addition to increased yields, test cabbages matured 2.5 wks. early, likely due to decreased pest pressure/stress under insect netting.